UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,982	04/02/2007	Robin Kurfurst	15675P620	2408

7590 08/01/2008

Blakely, Sokoloff, Taylor & Zafman
12400 Wilshire Boulevard, 7th floor
Los Angeles, CA 90025

EXAMINER	
GIBBS, TERRA C	

ART UNIT	PAPER NUMBER
1635	

MAIL DATE	DELIVERY MODE
08/01/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/584,982	KURFURST ET AL.	
	Examiner	Art Unit	
	TERRA C. GIBBS	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-59* is/are pending in the application.

4a) Of the above claim(s) *22-37 and 39-41* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38 and 42-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *May 5, 2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is a response to Applicant's Amendment and Remarks filed May 5, 2008.

Claims 38 and 57 have been amended. New claims 58 and 59 are acknowledged.

Claims 22-59 are pending in the instant application.

This application contains claims 22-37 and 39-41 and SEQ ID NOs: 2-5 as recited in claim 43 and SEQ ID NO:4 as recited in claim 44 drawn to an invention nonelected with traverse in the reply filed on December 18, 2007. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.

Accordingly, claims 38 and 42-59 and SEQ ID NO:1 have been examined on the merits.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

Applicant's information disclosure statement filed May 5, 2008 is acknowledged. The submission is in compliance with the provisions of 37 CFR §1.97. Accordingly, the Examiner has considered the information disclosure statement, and a signed copy is enclosed herewith.

Claim Rejections - 35 USC § 112

In the previous Office Action mailed February 5, 2008, claims 38, 42, and 46-57 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. **This rejection is withdrawn** in view of Applicant's Remarks filed May 5, 2008. Specifically, the Examiner is withdrawing this rejection in view of the fact that Applicant's disclosure, at page 9, lines 13 and 14 explicitly defines Applicant's definition of "PKC beta-1". Also, the Examiner is withdrawing this rejection in view of the fact that the prior art identifies a number of pharmaceutical antisense oligonucleotides which can be used in methods for depigmenting or bleaching human skin and or hair and for treatment of regional hyper-pigmentation, accidental hyper-pigmentation, and leucodermias as claimed. For example, see WO 95/02069 A1.

In the previous Office Action mailed February 5, 2008, claim 57 was rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of **treatment,** does not reasonably provide enablement for a method of **prevention**. **This rejection is withdrawn** in view of Applicant's Amendment filed May 5, 2008. Specifically, the Examiner is withdrawing this rejection in view of Applicant's Amendment to claim 58 to remove the term "prevention".

Claim Rejections - 35 USC § 102

In the previous Office Action mailed February 5, 2008, claims 38 and 42-57 were rejected under 35 U.S.C. 102(b) as being anticipated by WO 95/02069 A1 ('069)

(submitted and made of record on Applicant's Information Disclosure Statement filed November 20, 2006) as evidenced by Lazou et al. (Journal of Drugs in Dermatology, 2007 Vol. 6:s2-27). **This rejection is maintained** for the reasons of record set forth in the previous Office Action mailed February 5, 2008.

Response to Arguments

In response to this rejection, Applicants submit that Bennett as evidenced by Lazou fails to teach methods for depigmenting or bleaching human skin and or hair and for treatment of regional hyper-pigmentation, accidental hyper-pigmentation, and leucodermias including the topical application of a composition comprising at least one oligonucleotide containing between 7 and 25 nucleotides specifically hybridizing with genes or gene products coding for protein kinase C beta-1 as recited in clams 38 and 57. First, Applicants argue that the claims of Bennett are directed to modulation of PKC expression, where "modulation" has been understood by Bennett to be either increasing or decreasing the expression of PKC. Applicants contend that only an “inhibition” of PKC expression results in a depigmenting effect and therefore, the method of Bennett does not necessarily result in a depigmenting effect.

This argument has been fully considered, but is not found persuasive because first, it should be noted that Applicant's claims do not recite that PKC actually be "inhibited". The claims recite and require administration of at least one oligonucleotide capable of specifically hybridizing with genes or gene products coding for PKC beta-1 and does not necessarily require inhibition of PKC expression. Assuming *arguendo* that

Applicant's claims are for the intent and purpose of inhibiting PKC expression, it is not recited or required that the inhibition be full, complete, or 100%. Besides, wouldn't "decreasing" PKC expression as disclosed by Bennett equate to some degree of "inhibition"? Further, assuming *arguendo* that the instant claims did recite or require PKC inhibition, Bennett et al. at page 13, lines 12-15 defines "modulation" to be "stimulation or inhibition" of PKC expression.

Second, Applicants argue that a depigmenting effect can only be obtained if the PKC-beta 1 antisense oligonucleotide is contacted with melanocytes. Applicants contend that Bennett do not recite or identify melanocytes as particular targets of their methods.

This argument and contention has been fully considered but is not found persuasive because it appears that Applicants are arguing against limitations that are not recited in the instant claim(s). Nowhere do the claims recite or even require "melanocytes" as a particular target. Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It should be noted that Applicant's claim 57 does recite the term "melanocyte hyperactivity". However, claim 57 also recites other more general terms such as "proliferation", where Bennett et al. describe psoriasis as being a disease or condition associated with and "hyperproliferation" (see Bennett et al. at page 2, lines 31-36, and claims 70-72, for example).

Third, Applicants argue that the method of Bennett fails to expressly or inherently

disclose the claimed method for depigmenting or bleaching human skin or hair by topically applying the claimed cosmetic composition which includes oligonucleotides capable of specifically hybridizing with genes or gene products coding for PKC beta-1.

This argument has been fully considered but is not found persuasive because in the previous Office Action mailed February 5, 2008, the Examiner detailed that Bennett et al. teach every method step of the instant claims, and therefore would be expected to inherently carry out the functionality of the instant claims, absent evidence to the contrary. See the discussion of *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977) presented in the previous Office Action. Particularly, see pages 18 and 19 at the discussion, "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In meeting this burden, Applicants have provided only mere arguments that Bennett fails to expressly or inherently disclose the claimed methods. Applicant is reminded that arguments of counsel alone cannot take the place of evidence in the record. See MPEP §2106. These arguments alone are not enough to satisfy factual evidence that is required.

Fourth, Applicants argue that Bennett's use of an oligonucleotide specifically hybridizable with PKC beta-1 is never explicitly disclosed in connection with the treatment of psoriasis or skin cancer.

This argument has been fully considered but is not found persuasive because contrary to Applicant's argument, Bennett et al. disclose the use of an oligonucleotide specifically hybridizable with PKC beta-1 in connection with the treatment of psoriasis or

skin cancer. And this disclosure is explicit. For example, Bennett et al. disclose:

> (claim 70) - A method of treating a condition associated with expression of PKC comprising administering to a mammal an oligonucleotide specifically hybridizable with a PKC gene
>
> (claim 71) - wherein said condition is a hyperproliferative disorder
>
> (claim 72) - wherein said hyperproliferative disorder is psoriasis
>
> (claim 86) - wherein said PKC gene encodes PKC-α, β, γ,...
>
> (claim 89) - wherein said gene specifically encodes PKC-β

Therefore given these explicitly teachings, it is unfounded how Applicants are coming up with the opinion and argument that Bennett's use of an oligonucleotide specifically hybridizable with PKC beta-1 is never explicitly disclosed in connection with the treatment of psoriasis or skin cancer.

Applicants next argue that, based on the teachings of Bennett, it appears that psoriasis is associated with a decrease of PKC beta expression and that an antisense oligonucleotide to PKC beta 1, which would further decrease the expression of PKC beta, would be more detrimental than useful in the treatment of psoriasis. For this reason, Applicants contend that Bennett is a teaching away from Applicant's claimed invention.

This argument and contention has been fully considered, but is not found persuasive because it is unclear how Applicants are deriving at an assumption that Bennett et al. is a teaching away. As discussed *supra*, particularly at claims 71, 72, 86, and 89, for example, Bennett et al. are clear and explicit that an antisense oligonucleotide specifically hybridizable to PKC beta 1 will treat a condition associated

with expression of a gene encoding PKC-beta, including psoriasis. Thus, Applicant's arguments that Bennett et al. are a teaching away from the present invention is without merit and completely unfounded.

Applicants next argue that all experimental results concerning the therapeutic use of PKC antisense oligonucleotides disclosed by Bennett only relate to PKC-α and any disclosures regarding PKC-β are all generalizations and purely speculative. Applicants contend that there is no real teaching in Bennett that an antisense oligonucleotide to *any* PKC isoform might be used for treating psoriasis or skin cancer, and even more, no teaching that an antisense oligonucleotide of PKC beta 1 should be used.

This argument and contention have been considered, but are not found persuasive. As discussed *supra*, Bennett et al. are clear that an antisense oligonucleotide specifically hybridizable to PKC beta 1 will treat a condition associated with expression of PKC-beta, including psoriasis. See, for example, claims 71, 72, 86, and 89. This teaching is explicit and therefore it is impossible to conclude that this is not a “real teaching” as Applicants argue.

Regarding Applicant’s concern that all experimental results concerning the therapeutic use of PKC antisense oligonucleotides disclosed by Bennett only relate to PKC-α and any disclosures regarding PKC-β are all generalizations and purely speculative, this is not found persuasive explicit teachings and disclosures, such as those found in claims 71, 72, 86, and 89 is hardly a “generalization”. Bennett et al. are detailed, clear, and explicit in their teachings that an antisense oligonucleotide

specifically hybridizable to PKC beta 1 will treat a condition associated with expression of PKC-beta, including psoriasis. It is for this sole reason that the claims are anticipated by such teachings, absent evidence to the contrary.

Lastly, Applicants argue that assuming that Bennett discloses a method of treating psoriasis or skin cancer using a PKC-beta 1 specific antisense oligonucleotide, it would not disclose a method for treatment of regional hyper-pigmentation, accidental hyper-pigmentation, and leucodermias as recited in claim 57. Applicants contend that the oligonucleotide would be contacted with skin area affected by psoriasis or skin cancer, but not be the particular disorders recited in claim 57.

This argument and contention have been fully considered but are not found persuasive because considering the fact that Bennett et al. teach the exact method step of claim 57, namely topically administering a pharmaceutical composition comprising at least one oligonucleotide containing between 7 and 25 nucleotides specifically hybridizing with genes or gene products coding for protein kinase C beta-1, it is the Examiner's position that Bennett et al. would also treat regional hyper-pigmentation, accidental hyper-pigmentation, and leucodermias as recited in claim 57, absent evidence to the contrary. It should be noted that this reasoning of inherency was made by the Examiner in the previous Office Action mailed February 5, 2008. See particularly at pages 18 and 19, at the discussion of *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Specifically, see the discussion, "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In meeting this

burden, Applicants have provided only mere arguments that Bennett fails to inherently disclose the method claimed in claim 57. Applicant is reminded that arguments of counsel alone cannot take the place of evidence in the record. See MPEP §2106. These arguments alone are not enough to satisfy factual evidence that is required.

Thus, it is maintained that because Bennett et al. teach each and every method step of Applicant's claimed invention, the method taught, disclosed, and claimed by Bennett et al. would be inherent to the method(s) of Applicant's claimed invention, absent evidence to the contrary. See *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 139 (Fed. Cir. 1986) and *In re Best*, 562F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Therefore, absent evidence to the contrary, claims 38 and 42-57 remain rejected as being anticipated by WO 95/02069 A1 as evidenced by Lazou et al.

Applicant's Amendment filed May 5, 2008 necessitated the new ground(s) of rejection presented below:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 58 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 58 and 59 are indefinite because a GenBank accession number is not an appropriate means for identifying a sequence. See 37 CFR § 1.821(d) which states:

> (d) Where the description or claims of a patent application discuss a sequence that is set forth in the "Sequence Listing" in accordance with paragraph (c) of this section, reference must be made to the sequence by use of the sequence identifier, preceded by "SEQ ID NO:" in the text of the description or claims, even if the sequence is also embedded in the text of the description or claims of the patent application.

Furthermore, in the event that there is a change to the sequence or annotation, the GenBank accession number is updated and thus will not remain constant over time. Therefore, different versions of any given sequence may appear in the GenBank Database at any given time. Since the record of a GenBank accession number is constantly updated, and an original accession number might become secondary to a newer accession number, the recitation of a GenBank accession number fails to distinctly claim the subject matter which applicant regards as the invention. Appropriate correction is required.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terra C. Gibbs whose telephone number is 571-272-0758. The examiner can normally be reached on 9 am - 5 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James "Doug" Schultz can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer

your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

July 25, 2008
/Terra Cotta Gibbs/

/Sean R McGarry/

Primary Examiner, Art Unit 1635